



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 10/823,027      | 04/13/2004  | Kerien W. Fitzpatrick | 5061-061805         | 3370             |

28289 7590 10/04/2006

THE WEBB LAW FIRM, P.C.  
700 KOPPERS BUILDING  
436 SEVENTH AVENUE  
PITTSBURGH, PA 15219

EXAMINER

ARAQUE JR, GERARDO

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3629

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                |                                    |  |
|------------------------------|--------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/823,027  | Applicant(s)<br>FITZPATRICK ET AL. |  |
|                              | Examiner<br>Gerardo Araque Jr. | Art Unit<br>3629                   |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                    |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                               | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/16/2004</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Priority***

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 19 - 27 been renumbered the second 19 being 20, 20 being 21, and etc. up to 28.

### ***Claim Rejections - 35 USC § 101***

4. **Claims 1 – 28** are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility, a credible asserted utility or a well established utility.

The applicant discloses a method of managing food supply by predicting what customers would want to consume by generating data that contains how many people and/or vehicles are in the vicinity or in the food restaurant. However, the applicant has failed to properly disclose how it would be possible to be able to predict what consumers would want to eat without the use of historical data. The applicant claims that the prediction is done in real time without using historical data, but by counting how many consumers are entering the facilities. As a result the applicant's invention is unpredictable and fails to produce concrete results that are repeatable and, as a result, the invention is also fails to be useful and credible.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 1 – 28** are rejected under **35 U.S.C. 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant fails to properly disclose how to predict what consumers will want to eat at a food restaurant. As far as the examiner is concerned, the only thing that has been disclosed is a method of using a plurality of sensors in order to keep track of how many people are in the restaurant or around its vicinity. How does this information allow one of ordinary skill in the art to know how much of a particular food

Art Unit: 3629

that should be left in the bins? Moreover, how can this invention be carried out without the use of historical data? It would be one thing if historical data were to be used in order to estimate what is popular during certain times of the day, month, or year.

However, the applicant discloses that the disclosed invention improves on this old and well known practice by gathering the information in real time and through some time of calculation predict in real time what is needed. How is this possible? It is not possible for one to accurately predict what a person wants without some type of trend to refer back to. Furthermore, the examiner does not understand why the information would be shared with other restaurants in order to better understand what is consumed during those times. Is that not the same thing as referring back to using historical data, which is what the applicant is improving on?

Even further, the applicant discloses the use of a chemical sensor, but fails to properly disclose how it works. The only piece of information that the examiner was able to find was that the sensor senses the change CO. However the applicant fails to explain the actual specifics of how the device changes. Moreover, where would the sensor be placed? At what height should the sensor be placed? How can it differentiate between 1, 2, or more vehicles that are in the area? What if it is a windy day?

7. The following is a quotation of the **second paragraph of 35 U.S.C. 112**:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1 – 28** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the

steps. See MPEP § 2172.01. The omitted steps are: managing food supply in real time .

9. **Claims 1 – 28** are rejected under **35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. The examiner has found numerous issues regarding the invention, some of which have been discussed above. The which are the following:

a. The examiner does not understand how to properly predict how much food to have ready for individuals in a vehicle. What if there is more than one consumer in the vehicle? What if the individual is only going to the bathroom and not ordering food? The individual will still get picked up on the sensors, but would produce inaccurate results.

b. In regards to **claim 2**, the applicant discloses, “wherein electronically generating said real time data includes ***at least one of the following***.” For the purposes of the examination the examiner has decided to review only the subject matter and claims regarding the second information. Moreover, the applicant has used this terminology several times throughout the claims and as a result not all of the options that the applicant discloses will be examined.

c. In regards to **claim 3**, the terms, “at least one ***other of...***” are indefinite. The examiner is unsure as to whether or not the applicant is claiming both sets of information or just one. As it has already been discussed above the examiner will only examine the second information.

Art Unit: 3629

d. The applicant has disclosed the terms, "ordering pattern" which makes the examiner unsure as to what the applicant is trying to claim. As discussed already above, the applicant is claiming to make predictions in real time without the use of historical data. However the use of an ordering pattern is a form of historical data.

e. The term "vicinity" in claim several of the claims is a relative term, which renders the claim indefinite. The term "vicinity" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. How far from the restaurant does the vicinity cover? Is the vicinity on or off the property of the restaurant?

f. The applicant discloses estimating how much food to have in the bins. However, the examiner does not understand why an estimate needs to be made when a prediction has already been made. If the prediction is to be an accurate account of how much food to have ready then why would it be necessary to make an estimation that would result in having too little or too much food?

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 1 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Savage (US Patent 6,026,372)** in view of **Price et al. (US Patent 4,392,119)**.

13. In regard to **claims 1 and 19**, **Savage** discloses a method of managing food supply in real time comprising:

electronically predicting, based on said real time data, an amount of food to be ordered by said food consumers in a predetermined time interval immediately following said generation of said real time data **(Column 1 Lines 45 – 47)**

preparing said amount of food predicted to be ordered **(inherently included)**;

serving prepared food to patrons of food outlet **(inherently included)**;

However, **Savage** fails to explicitly disclose electronically generating real time data about food consumers inside or in the vicinity of a food outlet.

**Price**, however, does disclose a method of monitoring the arrival and duration of stay of a vehicle at a drive-in window **(Column 3 Lines 50 – 56)**. Moreover, it is old and well known for sports stadiums to monitor the amount of people entering the stadium in order to properly predict how much food would be needed during the event.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify **Savage** in view of the teachings of **Price** to include an electrical monitoring system in order to monitor the amount of food consumers inside or in the vicinity of a food outlet and, therefore, properly predicting the amount of food needed.

---



Art Unit: 3629

14. **Claim 2 – 14 and 17 – 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Savage (US Patent 6,026,372)** in view of **Price et al. (US Patent 4,392,119)** in further view of **Higgins (US Patent 5,053,868)**.

15. In regard to **claims 2 and 22**, the **combination of Savage and Price** are discussed above wherein electronically generating said real time data includes:

placing a second plurality of sensors around and in said food outlet to generate, in real time, a second information about automobile traffic flow external to said food outlet, and in the vicinity thereof, and human traffic flow external to said food outlet, inside the food outlet, and in the vicinity thereof (**Savage Column 3 Lines 50 – 56; as well as also being disclosed by Price and Higgins it is also old and well known that multiple types of sensor devices can be used to monitor the traffic flow of fast food restaurants Higgins Column 5 Lines 35 – 42**); and

electronically analyzing the second information in real time to generate said data about said food consumers (**Savage Column 4 Lines 37 – 48 as well as being obviously included when electronically predicting the amount of food needed as discussed above**);

However, the **combination of Savage and Price** fail to explicitly disclose that the second plurality of sensors is a color based vision sensor.

**Higgins**, however, does disclose the use of a color based vision sensor for monitoring automobile traffic of a drive-through fast food restaurant (**Higgins Column 2 Lines 37 – 41**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention in view of the teachings of **Higgins** to modify the **combination of Savage and Price** to use color based vision sensors in order to monitor food consumers.

16. In regard to **claims 3 and 23 – 24**, **Higgins** discloses a color-enabled camera (**Higgins Column 2 Lines 37 - 41**).

17. In regard to **claims 4 – 7 and 25**, as is disclosed by **Price and Higgins** above it is old and well known to use multiple types of sensors. Moreover, it is old and well known to use different types of sensors (individually or in combination) in order to monitor human and/or vehicle traffic flow. For example, it is old and well known that a shopping center will have some sort of sensor (pressure to sense the weight of vehicles passing through, magnetic loop as disclosed by **Price**, etc.) at the entrance of a parking lot to monitor the amount of vehicles entering and leaving. When the individual(s) exit their respective vehicle they must enter a doorway at which point the doors are usually automatically opened through the use of a sensor (infrared, laser beam, pressure, etc.) which would further be used to monitor the amount of people shopping at a particular store (Macy's, Sears, Nordstrom, etc.). Furthermore, for the doorways connecting the mall area where a door would usually not be used there are also more sensors in order to monitor the human traffic flow. The use of all these different type of sensors as well as those disclosed by the applicant are all old and well known and each of them would be put to use depending on the circumstances and the environment, i.e. would it be

Art Unit: 3629

economically feasible to have all of these type of sensors or a few or what type of sensors would be best for a given traffic flow or etc.).

18. In regard to **claims 9 and 26**, wherein said second information includes indications of one or more of the following:

direction of movement of said human and said automobile traffic flow including:

whether one or more humans in said human traffic are entering or exiting

the property of said food outlet (**Higgins Column 2 Lines 37 – 41**), and

whether one or more vehicles in said automobile traffic are entering or exiting the property of said food outlet (**Price Column 4 Lines 43 – 48**);

a total number of human food consumers entering and exiting said food outlet (**discussed above for claims 4 – 7**);

a total number of vehicles constituting said automobile traffic (**discussed above for claims 4 – 7**);

whether said human and automobile traffic is present on the property of said food outlet (**Price Column 4 Lines 43 – 48**);

whether one or more vehicles in said automobile traffic are entering or exiting a drive-thru food order lane on the property of said food outlet (**Price Column 4 Lines 43 – 48**); and

a total number of vehicles entering or exiting said drive-thru lane (**Price Column 4 Lines 43 – 48 as well as discussed above for claims 4 – 7**).

19. In regards to **claim 10**, wherein said real time data includes one or more of the following:

a first amount of time that it takes, on average, for one of said potential food consumers to wait prior to placing a food order (**Savage Column 5 Lines 8 – 13 in which the prediction would allow for an estimate of how long it would require a consumer to place an order**);

a first number of potential food consumers inside said food outlet (**discussed above**);

a second number of vehicles on the property of said food outlet (**discussed above**);

a third number of automobiles in a drive-thru food order lane on the property of said food outlet (**discussed above**);

a second amount of time that it takes, on average, for an automobile to remain in said drive-thru lane prior to arriving at a drive-thru ordering window (**Price Column 4 Lines 37 – 42**);

a third information about a corresponding ordering pattern of each food consumer present inside said food outlet or in said drive-thru lane (**Savage Column 5 Lines 8 – 13**); and

for each food order received, a corresponding fifth amount of time that it takes for an employee of said food outlet to receive each said food order (**Savage Figure 2 49 – 51**).

20. In regards to **claim 11**, wherein electronically analyzing second information includes electronically performing at least one of the following in real time:

processing said second information to identify and count vehicles constituting said automobile traffic external to and in the vicinity of said food outlet (**discussed above for claims 4 – 7**);

further processing said second information to identify and count vehicles present in a drive-thru food order lane on the property of said food outlet (**Savage Column 5 Lines 8 – 13**).

21. In regards to **claims 12 – 13**, wherein electronically predicting said amount of food to be ordered includes electronically performing the following in real time:

selecting one or more queuing models from a plurality of queuing models (**Savage Figures 2 – 4; Columns 2 – 5**);

inputting relevant portions of said real time data into respective one or more queuing models selected (**Savage Figures 2 – 4; Columns 2 – 5**); and

simulating each of said one or more queuing models after inputting said relevant portions of said real time data thereinto (**Savage Figures 2 – 4; Columns 2 – 5**).

22. In regards to **claim 14**, further comprising electronically performing at least one of the following in real time:

estimating impending food product demand in view of said prediction of said amount of food to be ordered by said food consumers (**Savage Column 5 Lines 3 – 7**); and

estimating demand for each completed food product available for consumption (**Savage Column 5 Lines 3 – 7**).

23. In regards to **claim 17**, wherein estimating demand for each completed food product includes estimating said demand for each said completed food product using a food production data input received from an employee of said food outlet.

24. In regards to **claim 18**, wherein electronically generating real time data includes electronically tracking objects present inside or in the vicinity of said food outlet to identify presence of said food consumers and to count a number of said food consumers present inside or in the vicinity of said food outlet **(as discussed above for claims 1 and 4 – 7)**.

25. In regards to **claim 20**, further comprising electronically performing at least one of the following in real time:

estimating impending food product demand in view of said prediction of said amount of food to be ordered **(Figures 2 – 4)**; and

estimating demand for each completed food product available for consumption **(Figures 2 – 4)**.

26. In regards to **claim 21**, system for managing food supply in real time comprising:

a plurality of sensors placed inside and in the vicinity of a food outlet, wherein said plurality of sensors electronically tracks objects present inside and in the vicinity of a food outlet to generate electrical signals containing information about presence of food consumers inside and in the vicinity of said food outlet **(Savage Column 3 Lines 50 – 56; as well as also being disclosed by Price and Higgins it is also old and well known that multiple types of sensor devices can be used to monitor the traffic flow of fast food restaurants Higgins Column 5 Lines 35 – 42)**; and

a computer containing a program code, which, upon execution by a processor in said computer, causes said processor to perform the following in real time:

analyze said electrical signals to generate digital data about said food consumers **Savage Column 4 Lines 37 – 48 as well as being obviously included when electronically predicting the amount of food needed as discussed above); and**

predict, based on said digital data, an amount of food to be ordered by said food consumers in a predetermined time interval immediately following generation of said digital data, wherein at least one of said plurality of sensors comprises a color based vision sensor (**Savage Column 1 Lines 45 – 47; see discussion regarding claim 1; Higgins Column 2 Lines 37 – 41).**

---

27. **Claim 15 – 16 and 27 – 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Savage (US Patent 6,026,372)** in view of **Price et al. (US Patent 4,392,119)** in further view of **Higgins (US Patent 5,053,868)** and in further view of **Banergee et al. (PGPub US 2002/0188495 A1).**

28. In regards to **claim 15**, the combination of **Savage, Price, and Higgins** are disclosed above, but fail to explicitly teach the actual management of food restaurant. However, **Banergee** discloses the actual management that is involved in a food restaurant is old and well known and although it is not explicitly stated within the combination of **Savage, Price, and Higgins** it is inherently implied that wherein

Art Unit: 3629

estimating impending food product demand includes electronically performing at least one of the following:

estimating a desired nominal component buffer level, wherein said component buffer level includes a plurality of bins of food product components (**Banergee Page 1 Paragraph 4**);

estimating remaining time for each of said plurality of bins before each said bin runs out of corresponding food product components (**Banergee Page 2 Paragraph 16**); and

estimating time required to fill one of said plurality of bins with corresponding food product components when said bin becomes empty (**Banergee Page 2 Paragraph 16**).

29. In regards to **claim 16**, wherein estimating impending food product demand includes displaying estimated food product demand on a display terminal (**Banergee Page 3 Paragraph 20**).

30. In regards to **claim 27**, wherein said information or data is aggregated across multiple stores and communicated to a manager (**Banergee Page 1 Paragraph 14**).

31. In regards to **claim 28**, wherein estimating food product demand further includes reporting food product hold times based on the time of production and the time at which the food product is served (**Banergee Page 2 Paragraph 15**).

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure which can be found on PTO-892 Notice of References Cited.

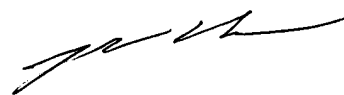


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerardo Araque Jr. whose telephone number is (571)272-3747. The examiner can normally be reached on Monday - Friday 8:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (571) 272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GA  
9/28/06



JOHN G. WEISS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600